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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,806	07/18/2003	Hsuan-Wen Wang	42P17399	3474

8791 7590 05/06/2005

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EXAMINER	
CASIANO, ANGEL L	
ART UNIT	**PAPER NUMBER**
2182	

DATE MAILED: 05/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/622,806	WANG ET AL.	
	Examiner	Art Unit	
	Angel L. Casiano	2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 July 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 July 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *20030718, 20050118*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

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DETAILED ACTION

1. The present Office action is in response to application dated 18 July 2003.

2. Claims 1-34 are pending in the present application. All claims have been examined.

Information Disclosure Statement

3. The information disclosure statements (IDS) submitted on 18 July 2003 and 18 January 2005 ~~was~~ WERE filed after the mailing date of the Application on 18 July 2003. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description:

- Figure 5, "570"

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-6, 8-10, 13-25, 27-29, and 31-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Lyles et al. [6,377,583 B1].

Regarding claim 1, Lyles et al. teaches a device (see Figure 3) having a *memory* device (see col. 10, lines 51 and 55; Figure 3, "27") and maintains flow control *status* (see col. 10, lines 60-61) for a plurality of flows. In the reference, each of the flows is identified by an associated *index* (see "circuit index" and "pointer" to location "in data memory 27"; col. 10, lines 54-55). The reference teaches receiving a flow *control message* and to determine the associated index for it (see col. 10, line 56). The flow control status is updated based on the received flow control message (see "determine", col. 10, lines 64-65; col. 11, lines 4-6).

As for claim 2, the reference teaches that the plurality of flows may be based on at least some subset of source/destination (see col. 8, line 17; Figure 7), priority (see col. 5, line 61), class of service (see col. 2, lines 26-27), and quality of service (col. 1, line 62).

As for claim 3, the reference teaches a flow control message is received in response to capacity of a queue (see "managed", "sized"; col. 8, lines 46-49).

As for claim 4, the reference teaches changing the propriety of objects (see col. 6, lines 5-7).

As for claim 5, the reference teaches updater includes a comparator ("recognizer"; col. 10, line 62) to compare the received flow control message and updating ("determine"; col. 10, line 64) the flow control *status* maintained in the memory device based on the comparison.

As for claim 6, the reference teaches *updating* the flow control status maintained in the memory device to reflect status identified in the received flow control message (see "message also indicates whether cell is to be queued in the data path, the control path, or both"; col. 11, lines 2-6).

As for claim 8, the reference teaches discarding the control message (see "when the cell has been appropriately queued", "return an added message to the cell flow control unit"; col. 11, lines 6-11). The discarding function notified the *flow control unit* that the newly queued cell needs to be taken into account in future computations.

As for claim 9, the reference teaches the "cell flow control unit 55" which sends a message for a particular flow based on the status (see col. 11, lines 1-4).

As for claim 10, the reference teaches that selection of the queue is based on the priority of the related flow (see col. 9, lines 51-52).

As for claim 13, the reference teaches an index associated with a particular flow (see col. 9, lines 38-47).

Regarding claim 14, Lyles et al. teaches a device (see Figure 3) having a *memory* device (see col. 10, lines 51 and 55; Figure 3, "27") and maintains flow control *status* (see col. 10, lines 60-61) for a plurality of flows. In the reference, each of the flows is identified by an associated *index* (see "circuit index" and "pointer" to location "in data memory 27"; col. 10, lines 54-55). In addition, the reference teaches the "cell flow control unit 55" which sends a message for a

particular flow based on the status (see col. 11, lines 1-4) and that selection of the queue is based on the priority of the related flow (see col. 9, lines 51-52).

As for claim 15, the reference teaches a flow control message is received in response to capacity of a queue (see "managed", "sized"; col. 8, lines 46-49).

As for claims 16-17, the reference teaches updater includes a comparator ("recognizer"; col. 10, line 62) to compare the received flow control message and updating ("determine"; col. 10, line 64) the flow control *status* maintained in the memory device based on the comparison. Although not citing that the message generator "invalidates" or "erases", the flow control unit performs determinations as to the status, as cited above.

As for claim 18, in the reference, each of the flows is identified by an associated *index* (see "circuit index" and "pointer" to location "in data memory 27"; col. 10, lines 54-55). The reference teaches receiving a flow *control message* and to determine the associated index for it (see col. 10, line 56). The flow control status is updated based on the received flow control message (see "determine", col. 10, lines 64-65; col. 11, lines 4-6).

Regarding claim 19, this essentially constitutes the method to be performed by the device disclosed in claim 14. The present reference teaches the limitations corresponding to the device and therefore also teaches the steps corresponding to the method. The present claim is rejected under the same basis.

As for claims 20-22, these constitute the method to be performed by the device disclosed in claims 15, 16, 18. The present claims are therefore rejected under the same basis.

Regarding claim 23, this essentially constitutes the method to be performed by the device disclosed in claim 1. The present reference teaches the limitations corresponding to the claimed device and therefore also teaches the steps corresponding to the method. The present claim is rejected under the same basis.

As for claims 24-25, 27-29, and 31, these constitute the method to be performed by the device disclosed in claims 5-6, 8-10, and 13. The present claims are therefore rejected under the same basis.

Regarding claims 32-34, these constitute the implementation of an apparatus, containing the limitations of the device disclosed in previously rejected claims. The present reference teaches the limitations corresponding to that device and therefore also teaches the apparatus implementing its characteristics. The present claims are rejected under the same basis.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claim 7 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lyles et al. [US 6,377,583 B1] in view of Davies et al. [US 5,819,111].

As for claim 7, Lyles et al. does not explicitly teach an updater which *makes no changes to the flow control status* maintained in the memory device if the comparator determines the

associated index has the same flow control status as the received flow control message (emphasis added). Regarding this aspect of the invention, Davies et al. teaches a flow control (see Title) system where if a buffer is not full, the *flow control state* variable is *unchanged* (see col. 8, lines 5-13). Accordingly, at the time of the invention, one of ordinary skill in the art would have been motivated to combine the cited disclosure in order to complete a process, until the next instruction is received, as taught by Davies et al. (see col. 8, lines 12-13).

As for claim 26, this constitutes the method to be performed by the device previously disclosed in claim 7. The present claim is therefore rejected under the same rationale.

9. Claims 11-12, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lyles et al. [US 6,377,583 B1].

As for claim 11, the Lyles et al. reference fails to explicitly teach, "broadcasting" a flow control message. Nonetheless, the reference does teach "sending" and "arrival message" to "notify a cell flow control unit 55 of the cell's arrival" (see col. 10, lines 55-56). Therefore, although Lyles et al. does not refer to the message as "broadcast", it would have been obvious to one of ordinary skill in the art at the time of the invention that the flow control unit 55 is notified by a message that is transmitted.

As for claim 12, the reference teaches updating the flow control status associated with the message (see col. 10, lines 61-65).

As for claim 30, this constitutes the method to be performed by the device previously disclosed in claim 12. The present claim is therefore rejected under the same rationale.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Tucker et al. [US 2003/0193894 A1] teaches a method and apparatus where early detection information 404 is maintained by the flow control logic 324 of FIG. 3. The status of each virtual lane is continually updated so that the early detection information 404 includes the status of each virtual lane (e.g. space in virtual lane buffer associated with a virtual lane).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angel L. Casiano whose telephone number is 571-272-4142. The examiner can normally be reached on 9:00-5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 571-272-4146. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Alc
22 April 2005

JEFFREY GAFFIN
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